



Ukraine: Water Supply and Treatment

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Summary

This report reviews domestic and industrial water supply and wastewater treatment equipment market in Ukraine. Almost one third of the water supply and drainage system in Ukraine is deteriorated. Introduction of new and reconstruction of operating wastewater treatment plants, introduction of modern multilevel technologies for the anaerobic digestion of sludge methane tanks, dehydration in sediment in sludge beds with vacuum filters and further reactant treatment are badly needed. Domestic wastewater in Ukrainian cities and settlements goes to communal sewage disposal plants. Industrial wastewater also goes to communal public owned treatment plants, if its concentrations will not damage the drainage systems and the water has undergone local purification at the facility through biological or chemical treatment. European, Russian and locally manufactured water treatment equipment dominates the market.

Market Demand

Ukraine's water sector infrastructure (and the respective managing enterprises) are predominantly owned by municipalities. The water supply and sewerage services are centralized and managed mostly by municipally owned enterprises, called Vodokanal. Private companies lease several utilities. Some concessions with small private entrepreneurs for water, heat and housing are operating in rural areas in Crimea. Several utilities have the status of joint stock companies and nine - limited liability companies. Foreign operators manage several small industrial water utilities.

Daily consumption of water (both domestic and industrial) in Ukraine exceeds 12 million cubic meters (or 17 percent of daily surface and underground water resources) and is 2-3 times higher than in EU countries. The amount of suspended matter and solutes per one inhabitant is relatively consistent, and is about 100g/day. Industrial wastewater has various chemical compositions depending on the industry type. Oil processing, metallurgical, chemical and pulp and paper industries account for the largest water-consumption.

Ukraine currently faces serious water quality challenges. Almost half of the water discharged into surface waters is insufficiently treated. Today, most of surface water sources are second and third grade (contaminated and unsuitable for drinking water supply.) Similarly, ground water sources have become widely polluted with agricultural chemicals.

In most cases surface water, used as a supply for drinking water, undergoes a range of conventional treatments, including coagulation with aluminium sulphate, sedimentation, rapid sand filtration and chlorine disinfection. Ultraviolet disinfection is not widely implemented.

Ukraine introduced National Program "On Drinking Water" for 2006-2020 (the Law was adopted by the Parliament in March 2005). Unfortunately, the Program lacks proper implementation mechanisms and sufficient financing.

According to the National Program "On Drinking Water" estimated costs for upgrade and reconstruction of water supply and treatment systems in urban areas are \$490 million; in rural areas - \$475 million. Implementation of the Program is planned in 3 stages (2006-2010, 2011-2015, 2016-2020). Financial sources include the State budget, local budgets, municipal water utilities budgets, internal and external

loans, international grants and programs. The coordinating agency is the Ministry of Housing and Communal Services of Ukraine.

Significant strategic opportunities exist for U.S. companies in this emerging market, which should be studied on a case-by-case basis.

Market Data

Although significant, the water treatment systems and services market in Ukraine cannot be calculated using traditional methods. Market size analysis is complicated by the difficulty in obtaining exact statistical data from Ukrainian institutions.

The following data apply to water supply and wastewater collection and treatment:

Water

Drinking water production:	4.4 billion cubic meters per year
Drinking water coverage:	74.6% (country average); 100% in municipalities (urban piped connections - 98%; rural piped connections - 17.4%)
Distribution network:	>50,000km; the average age of the network is 30 to 40 years.

Wastewater

Domestic wastewater:	3 billion cubic meters per year
Industrial wastewater:	2.4 billion cubic meters per year
Sewerage coverage:	60% (country average); 90% - centralized connection in urban areas
Sewer network:	>30,000km
Wastewater reuse:	Only at local level.

Virtually all municipal water treatment facilities and industrial pre-treatment systems need replacement and reconstruction. One quarter of water purification systems, every fifth pumping plant and half of pump units are obsolete, resulting in higher operational expenses. 30 percent of the water supply and drainage system is in emergency condition, and losses in water supply system reach 30-40 percent. The majority of Ukrainian industrial enterprises need reconstructed or new water pollution control systems.

Best Prospects

Introduction of new technologies in water treatment (including multilevel technologies for the anaerobic digestion; ultraviolet disinfection; chemical and biological treatment of industrial wastewater) is very important. Demand is growing for new energy-saving technologies.

The best sales prospects for equipment include:

pumping units,
on-line organic pollution monitors,
chlorine residual analyzers and controllers,
test/analyzing labware, monitoring equipment.

The highest demand is for the following technologies:

sludge treatment and de-watering,
water leakage control programs,

industrial pollution control systems, technologies involving the reduction of effluents, anaerobic digestion processes, including the use of methane for electricity generation process.

Key Suppliers

Foreign companies are active in supply of pumping equipment, wastewater pipes, polymer piping systems for water supply, internal and external sewage, drainage, as well as isolated systems of drain water filtration and drainage systems.

European, Russian and locally manufactured water treatment equipment dominates the market.

Locally-produced municipal filtration systems are based on chlorine and aluminum sulfate process and only disinfect drinking water.

Although the Vodokanals, municipal water and wastewater enterprises, theoretically prescribe the kind of treatment each plant needs to provide, the Ukrainian government does not provide equipment for industrial water pollution control. Enterprises or their parent ministry typically manufacture their own customized equipment for industry needs.

During the past years, U.S. exporters of water treatment systems have become more active in the Ukrainian market. Some of these companies have participated in trade programs, investment projects, and have exhibited at Ukrainian trade shows. Exporters of domestic water filters and water supply systems have also expanded penetration into the Ukrainian market.

Prospective Buyers

There are more than 6,000 water supply and sanitation utilities in Ukraine, with communal, state, private and mixed types of ownership. 83% of the utilities are owned by municipalities. Private companies lease several utilities. Some concessions with small private entrepreneurs for water, heat and housing are operating in rural areas in Crimea. Several utilities have the status of joint stock companies, and nine limited liability companies. Foreign operators manage several small industrial water utilities.

Market Entry

U.S. companies entering the Ukrainian market should approach with a long-term perspective. Business in Ukraine is often based on relationships, so selecting a good local partner and/or establishing a local office are crucial to long-term success. To find a potential partner, we recommend the U.S. Embassy's Commercial Service's International Partner Search and Gold Key programs to conduct initial screening. (For more details please refer to <http://www.buyusa.gov/ukraine/en/8.html>) U.S. companies should use appropriate due diligence in selection of partners and should be mindful of the parameters of the Foreign Corrupt Practices Act.

Kyiv is not the only hub of trade in Ukraine. Look for distributors that have nationwide capabilities, including those located in the cities of Dnipropetrovsk, Donetsk, Lviv, Odessa, Zaporizhzhya, and Kharkiv. These regions are considered important industrial centers of Ukraine and are densely populated. Covering the Ukrainian market from regional offices in Poland or Russia is not effective. On-the-ground presence is crucial to business development here.

Joining the American Chamber of Commerce and obtaining experienced legal and accounting support are other basic steps.

While many U.S. firms have experienced marked success here, Ukraine is not a market for the first-time exporter. Companies doing business here must develop a tolerance for uncertainty, and the persistence to overcome obstacles to doing business.

Financing

The Ministry of Housing and Communal Services develops the principal regulatory documents for the sector including tariff setting, licensing and operations supervision. It also collects water sector performance data, jointly (with municipalities) negotiates international loans and monitors state and international investment programs for the sector.

The national government (Ministries of Housing and Communal Services, of Economy, of Finance and Anti-Monopoly Committee) sets general requirements on costs that can be recovered through water and wastewater tariffs. Local governments must follow these regulations. Water and wastewater tariffs are charged separately. Water supply normally includes water pumping, treatment and distribution to customers. Wastewater service includes wastewater collection, treatment and disposal. Each utility has its own procedure for charging customers for services. Currently water and wastewater tariffs do not cover operating costs (operational cost recovery is improving, but still hasn't reached 95%); and in many places, wastewater treatment suffers from a financing gap in cash-strapped water utilities, which are increasingly releasing wastewater without treatment.

In August 2007 the World Bank approved the Urban Infrastructure Project for Ukraine. The project includes the following components:

- institutional capacity -- this component would help utilities to adopt commercially oriented business-type practices and become financially viable through the preparation of annual business plans;
- rehabilitation investments -- this component would address the most urgent investment needs of the water, wastewater and solid waste sectors;
- energy efficiency -- this component would address the most urgent needs related to energy efficiency;
- project management -- this component would finance implementation of the project.

The Project would be implemented during 2008-2012 under the overall responsibility of the Ministry of Housing and Communal Services with close cooperation with the Ministry of Finance and Ministry of Economy. The total projects cost is \$ 140 million.

Rehabilitation investments would target the following areas: Chernihiv, Donetsk, Ivano-Frankivsk and Odesa. The investments would be implemented in two phases. The first phase would target priority investments for the first year investments. The second phase would address investments that involve efficiency and sustainability and most importantly, replace high energy-consuming pumps and related infrastructure with efficient and energy saving equipment to reduce operating costs.

External assistance is likely to play only a part in achieving needed environmental improvements in Ukraine. Funding from the Ukrainian Government and from local budgets remains crucially important.

Market Issues & Obstacles

Importers in Ukraine should expect a slow working bureaucracy and a large volume of paperwork. Importers are required to complete a customs freight declaration for every item imported. Use of licensed customs brokers to navigate the often non-transparent and seemingly inconsistent customs regulations is recommended. Constantly changing regulations and, in many cases, the mood of the customs officer, may hinder the successful importation of a product.

Production of industrial wastewater pretreatment and treatment systems in Ukraine is coordinated by Ukrainian ecology control institutions and the Vodokanals, municipal water and wastewater enterprises. Regulations prescribing wastewater pretreatment by industrial enterprises in Ukraine are based on the findings of the Sanitary Epidemiological Station (SES), which is under the jurisdiction of the Ukrainian Ministry of Health. Each body of water (i.e., the Dnipro River and the Black Sea) is subject to individually-defined water quality regulations. The SES regularly samples and analyzes water to determine the composition of pollutants and compares the results to set standards for that body of water.

Imported equipment is subject to value-added tax (VAT), currently at 20 percent. Mechanical equipment used for water recycling is exempted from excise taxes and import licensing. Electrical equipment and control systems are subject to import certification in Ukraine.

Contact information for the State Customs Service and Certifying Authority:

State Customs Service of Ukraine:
11 Degtyarivska St., Kiev 04119 Ukraine
Tel: 38044-247-2606, 274-2706
Fax: 38044-236-8281
E-mail: dmsu@customs.gov.ua
<http://www.customs.gov.ua/>

DerzhSpozhyvStandard (State Committee of Ukraine for Technical Regulation and Consumer Policy, <http://www.dssu.gov.ua/>)
DerzhSpozhyvStandard has created a network of 28 state centers of standardization, metrology and certification, and 118 certifying bodies and testing laboratories (centers) throughout Ukraine. Each center is responsible for testing a particular item. Companies seeking testing should first contact DerzhSpozhyvStandard, because it makes the ultimate determination on certification.

State Enterprise "Ukrainian Scientific and Research Center of Standardization, Certification and Quality" (UkrNDNC):
2, Svyatoshynska St., Kiev 03115 Ukraine
Tel: 38044-452-6907
Fax: 38044-452-3396
E-mail: derzhst@carrier.kiev.ua

Publication of Technical Regulations can be found at the official website of the State Committee of Ukraine for Technical Regulation and Consumer Policy: <http://www.dssu.gov.ua/control/en/index>

Trade Events

Aqua Ukraine – annual trade show for water supply and treatment equipment and technologies. Aqua Ukraine 2008 will be held on October 7-10, 2008 at the Kiev International Exhibition Center (<http://www.tech-expo.com.ua/eng/aqua/home.php>).

Resources & Key Contacts

Ministry of Housing and Communal Services of Ukraine: <http://www.minjkg.gov.ua>
Ministry for Environmental Protection of Ukraine: <http://www.menr.gov.ua>
State Customs Service of Ukraine: <http://www.customs.gov.ua>
State Committee of Ukraine for Technical Regulation and Consumer Policy: <http://www.dssu.gov.ua/control/en/index>

For More Information

The U.S. Commercial Service in Kiev, Ukraine can be contacted via e-mail at:
Olena.Stephanska@mail.doc.gov; Phone:380-44-4904018; Fax: 380-44-490-4046 or visit our website:
www.buyusa.gov/ukraine

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